DOCUMENT RESUME

ED 151 871 CS 502 005

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TITLE Subliminal Stimulation: Hoax or Reality?
PUB DATE [76]
NOTE 15p.; Study prepared at University of Iowa

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Behavioral Science Research; Communication (Thought Transfer); *Reactive Behavior; *Stimulus Behavior; *Verbal Stimuli; *Visual Stimuli
IDENTIFIERS *Subliminal Perception

ABSTRACT

Subliminal stimulation is defined as that which is perceived by an individual below the threshold of awareness or cognizance. This article traces the history of research in subliminal stimulation to illustrate that under certain circumstances and conditions, this behavioral phenomenon does occur. Although subliminal stimuli do affect human response, the article asserts that there is no sound evidence available to prove its effectiveness in changing behavior. Rather, studies show that the subject's motivational state determines the effectiveness of the stimuli; people do not act contrary to their desires. The article concludes with observations regarding the ethics involved in using this type of communication. (MAI)

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SUBLIMINAL STIMULATION: HOAX OR REALITY?

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Descriptive research in the area of subliminal stimulation is providing a renewed interest in the use of subliminal cues by our mass media. Critics claim that we are being assulted daily by subliminal messages that have the power to modify our behavior and values without our awareness or concent. The implications of this "communication without awareness" are many, but the scope of this paper is confined to three specific areas. First, the major portion of the paper demonstrates that, under certain circumstances and conditions, the phenomenon of subliminal stimulation (and perception) does, in fact, occur. Secondly, the effectiveness of subliminal stimulation is explored, and the third section comments on the ethical issues involved in this type of communication.

CS502005

SUBLIMINAL STIMULATION: HOAX OR REALITY?

People in our society are manipulated daily by our social and economic institutions. Although the concept of free will is theoretically central to Western democratic philosophical thought, schools, churches, businesses and governmental agencies operate on the presumption that they can induce changes in the behavior of individuals. Our entire mass media system is supported by a merchandising-consumer oriented economic system that exists because human behavior can be directed and controlled. Federal and state agencies have been concerned with the impact of this system for several years. Investigations into advertising directed at young children and legal attempts to prove that television can control our behaviors--even to the act of murder--have received the most publicity recently.

Wilson Bryan Key, author of Subliminal Seduction and Media Sexploitation, poses a potentially more dangerous threat to our concept of free will from the mass media:

> It may also be difficult to believe that a secret technology has existed and been in widespread use for years which modifies behavior invisibly, channels basic value systems, and manages human motives in the interest of special power structures.[1]

Vance Packard referred to the same phenomenon several years earlier:

> Typically these efforts take place beneath our level of awareness; so that the appeals which move us are often, in a sense, "hidden." The result is that many of us are being influenced and manipulated, far more than we realize, in the patterns of our everyday lives.[2]

The phenomenon both are referring to is typically labeled "subliminal stimulation." Key claims that the situation is becoming more serious and, "today, subliminal stimuli assults the psyches of everyone in North America throughout each day of their lives--from infancy into old age. The effects of this bombardment are cumulative."[3] The various aspects and implications of this "communication without awareness" are many, but I wish to confine the scope of this paper to three specific areas. First, the major portion of the paper will concern itself with showing that, under certain circumstances and conditions, the phenomenon of subliminal stimulation (and subliminal perception) does, in fact, occur. Secondly, the effectiveness of subliminal stimulation will be explored, and the third section will comment on the ethical issues involved in this type of communication.

Only two articles dealing specifically with subliminal stimulation have been published in speech communication oriented journals.[4] Both were published twenty years ago and fail to examine the central issues of use or effect in the mass media. For that reason and because of the complex nature of this phenomenon, it seems useful to begin with a definition of subliminal stimulation and perception, and identify the various terms that are used synonymously. McLeary and Lazarus suggested nearly a quarter of a century ago that the perceptual activity that operates at some level below that required for conscious recognition be called "subception."[5] Abrahamson defines it as "discrimination without awareness"[6] and Calvin refers to it as "the ability to react without knowing what stimuli caused the reaction."[7] Obviously these definitions are complimentary and point to the same phenomenon. Subliminal perception, then, refers to that which is perceived by an individual below his threshold of awareness or cognizance. Supraliminal perception, on

the other hand, would be that which is perceived by an individual above his threshold of awareness, that which he can physically observe and report. Each individual's threshold of awareness is not only different from others' thresholds but is of a dynamic nature itself, adapting itself to the occasion and context of the situation.

Although the concept of subliminal stimulation received its greatest popularity (or perhaps notoriety) during the 1950's, it has been studied by psychologists for well over one hundred years. Suslowa conducted experiments in 1863 concerning the effect of subliminal stimulation, using two pointed objects to prick the skin of his subjects. As the points were moved closer together and the pressure on the skin lessened, the subjects were unable to say whether they were being pricked by one object or by two objects. At this time, Suslowa asked them to guess. Their "guesses" turned out to be correct more times than not and this indicated that despite no conscious knowledge of the stimuli, the subjects were still receiving information.[8] McConnell reports that in 1884, Pierce and Jastrow "were able to show that subjects could discriminate differences between weights significantly better than chance would allow, even though the differences were so small they had no confidence whatsoever in their judgments."[9] McConnell also refers to an experiment in 1898 by Sidis in which he showed that "subjects could reliably distinguish letters from numbers, even when the stimuli were presented at such a distance from that the subjects thought they were relying on pure guesswork for their judgments."[10]

Various studies have been completed based on the experiment by Sidis but using different stimuli such as whispers and geometric figures. Baker, for example, discovered that his subjects were able to distinguish diagonal

from vertical crossed lines, and dot-dash from a dash-dot auditory stimulus.[16] The studies thus far cited are all relatively non-sophisticated by today's standards but were instrumental in showing the possibility of subliminal stimulation. McConnell summarizes their contributions:

> In his review, Adams points out certain general weaknesses inherent in studies of this type, but agrees with the present authors that discrimination can occur under certain circumstances. However, it is interesting to note that, in nearly all studies reporting relevant data, the reliability of the subjects' judgments increases directly with the intensity of stimuli. If a valid extrapolation can be drawn from this finding, it would be that accuracy of perception increases as the stimulation approaches a supraliminal level.[12]

More recently, studies have been undertaken to attempt to show that it is possible to condition subjects to subliminal shock. The experiments of McCleary and Lazarus are considered classics in this area. They presented their subjects with ten nonsense syllables. In a conditioning period, five of the nonsense syllables were accompanied by a mild shock. They then conducted the experiment and measured the response of the subjects. The nonsense syllables which had previously been associated with shock produced a greater psychogalvanic reflex when presented subliminally than did the non-shock syllables.[13]

Until the middle of the twentieth century, relatively few people outside the field of psychology were even aware of the concepts of subliminal stimulation and perception. And then several newspapers reported that a command to eat popcorn and drink coke, flashed on a movie screen for a tiny fraction of a second, increased purchases of both dramatically. The public, and people like Vance Packard, were generally outraged. They seemed to feel that their legal and moral rights had been violated. Many seemed to believe, as Packard and Key have inferred, that subliminal stimulation (in this case

in the form of advertising) could be used to make them do things that they would not ordinarily do. Such claims gave rise to a series of charges and countercharges that eventually ended up in the United States Congress and the Federal Communications Commission. The New Jersey Assembly created a Commission to Study Subliminal Projection in 1957 with the power to "propose legislation to regulate or ban the use of 'hidden message advertising.'"[14] The concern with subliminal stimulation, however, has not been limited to the United States.

> The Canadian Radio Television Commission, similar to the FCC in the United States, recently amended their regulations to forbid the use of 'any advertising material which makes use of any subliminal device' . . . . Similar attempts to ban subliminal stimuli were made by the British in their Broadcast Code, by Belgium in a 1972 law, and by the United Nations Commission on Human Rights in a report to their Secretary-General on October 7, 1974.[15]

The notion that one individual can influence the thoughts and actions of another individual without the second individual's knowing about it is a fascinating, and potentially dangerous one. The increased public awareness and concern for this situation gave rise to an abundant amount of research on subliminal stimulation in the late 1950's and early 1960's. Researchers became more conscious of their methodologies in an attempt to make more definite claims concerning subliminal stimulation. Along with this came an increased interest in the concept of threshold. They emphasized that the threshold was not an absolute point that divided no awareness from perfect awareness but that it could be better thought of as a continuum of awareness. Thus, the threshold of an individual varies as a result of changes in needs, drives, situations, etc. Operationally defined, "threshold (or limen) refers to that stimulus magnitude which can be distinguished 50% of the time."[16]

The newspapers had claimed that subliminal stimulation was effective. Researchers, primarily in the field of psychology,set out to find out how effective it was and under what circumstances people could be effected. In the late 1950's, Black and Bevan conducted experiments to answer two questions. First, do subliminal stimuli interpolated between supraliminal stimuli influence judgments of the latter; and second, if so, is their effect similar to that associated with anchors above the threshold? To do this they investigated the effect of subliminal electrical shock upon the judged intensity of supraliminal shocks. The members of the experimental group each received one hundred subliminal shocks while the control group received none. Both groups then received supraliminal shocks. Both groups were aware of the shocks but the control group consistantly judged the shocks to be of greater intensity than did the experimental group. Thus, even though the members of the experimental group were not aware of the subliminal shocks, they were conditioned and rated the supraliminal shock as significantly less intense.[17]

Johnson and Zara conducted experiments to determine if the threshold of awareness was different for different words. They selected four words that were rated high in "meaningfulness" and four that were rated low in "meaningfulness." They believed that there was a relationship between need and word "meaningfulness" and found that there was a strong inverse relationship between the "meaningfulness" of a word and the perceptual threshold. In other words, the more meaningful the word, the lower the threshold at which it could be perceived. This study had followed other studies that had indicated a high degree of association between need achievement and perceptual thresholds and attempted to extend this association to word "meaningfulness."[18]

Beier and Donovial attempted to determine the problem solving ability of students aided by subliminal stimuli as opposed to those who were not aided. The authors were aware that a person can receive a concept "subliminally" and that he can use the concept for later problem solving and yet remain unaware that he had received the information. They used three different age groups in their experiment to determine what differences existed between various age groups as far as reception of subliminal stimuli was concerned. The results obtained suggest several things. First, the effect of subliminal cues is very similar to supraliminal cues. Secondly, they discovered that repeated exposure to the subliminal cues allowed the subjects to become aware of the cues. The authors suggest that this confirms the idea that subliminal cues are not truly subliminal, but they are unable to say why these cues eventually become reportable. Thirdly, the authors found that age differences had no effect on the subject's ability to recognize the cues. Fourthly, the effect of the supraliminal cues in helping the subjects solve the problems; both were more effective than the use of no cues for the subject.[19]

Beier and Griffin conducted another study more directly relevant to the "effect of subliminal stimulation." They realized that subliminal cues were relevant to the subject when they were relevant to the problem at hand. But, what effects would be present if this motivational state was not present? In other words, what if the subjects were trying to solve a problem (motivated) and the subliminal cues that were presented had no relevance to the problem? The underlying question is, of course, can individuals be influenced to make specific choices without being motivated to make that choice? One might be able to extend this to questions like, "Can a person be influenced to buy a boat or a new car if he really doesn't want one, or commit an act he

would not otherwise perform? They concluded that the motivational state of the subject is indeed very relevant to the ultimate effectiveness of subliminal stimulation. Specifically they concluded: "That the present experiment showed that when cues are introduced peripherally to the main task they have no influence upon behavior."[20]

These studies would seem to suggest that the use of subliminal stimulation is not as dangerous nor as effective as Key and Packard would have us believe. Why, then, have various governmental agencies attempted to ban the use of subliminal messages? Israel Goldiamond offers a partial answer in a "Statement on Subliminal Advertising." Goldiamond asserts that the current hysteria (1959) which exists concerning the use of subliminal advertising is unwarranted. It comes from a nearly complete misunderstanding of the scientific issues involved. There are two basic understandings: First, it is assumed that the stimulus which controls our buying behavior is of the Pavlovian kind, when actually it is a discriminative stimulus; and second, making the stimulus less visible so that we are not conscious of it does not make it enter the Unconscious or the Subconscious. What it really does is make it weaker and thus less effective. He offers an excellent analogy to the present situation:

> Many years ago, when the X-ray was first announced, the legislature of one of our Eastern states passed a bill forbidding the use of X-ray machines in public theatres, on the grounds that they might be used by unscrupulous men to peer through women's clothes.[21]

Kendler also concludes that there is really no sound evidence to show us that subliminal advertising is effective.[22] It seems, then, that the protective measures taken by the various governmental agencies were taken in reaction to public opposition to its use based on legal and moral grounds rather than as a result of scientific findings concerning the effectiveness of subliminal stimulation.

The behavioral research cited above has provided us with two important conclusions. First, the existence of subliminal stimulation and perception was documented by scientists under carefully controlled situations. Secondly, and most importantly, the effects were measured and demonstrated to be minimal. While the amount of experimental research in this area has, as a result, decreased dramatically in the last decade, descriptive research is providing a renewed interest in subliminal stimulation.

The most important research of this type is being done by Mediaprobe: Center for the Study of Media and its current president, Wilson Bryan Key. As a Professor of Journalism and author of two major books on subliminal stimulation,[23] Dr. Key has established himself as an authority in this area. Working from a phychological and psychoanalytical basis, Key and his associates have successfully demonstrated that subliminal stimuli and techniques are being used extensively in all mass media, from the lyrics of popular songs to the front pages of our leading newspapers and magazines. The most obvious uses of these subliminal stimuli are found in print advertisements. From the SEX emplants in the arm of the baby in the Crest ad[24] to the words SEX and FUCK in the Bell Telephone ad[25] to the more familiar pictures and drawings in the ice cubes in liquor ads,[26] Key claims to have documented thousands of cases of subliminal stimuli in our society. SEX embeds have even been found in Ritz crackers[27] and political propaganda.[28]

There is no reason to deny the existance of these subliminal stimuli. They appear frequently in our mass media and have been carefully documented. Beyond that, however, the issue is not so clear. The 1974 United Nations Task Force on Human Rights demonstrated that it was technically possible to broadcast subliminal content anywhere in the world via satellite. Their report stated that it was even possible:

> . . . to modify or even eliminate cultures through subliminal reprogramming of the unconscious, and strongly recommended that all member nations pass rigorous laws prohibiting such techniques, especially when the media crossed national or cultural frontiers.[29]

This committee obviously believes that it is unethical and dangerous to influence people or cultures to do something they would not have done of their own free will. Few would disagree with this argument. They also assume, as Packard and Key seemingly do, that the use of subliminal stimulation can accomplish that goal. Thus far, as I have demonstrated in this paper, no scientific evidence has been advanced to make these claims tenable.

Perhaps the question of ethics is the area where this controversy must be resolved. Is it ethical for anyone to modify our behavior subliminally through the mass media? Goldiamond, cited earlier in this paper, argues that it is not really an issue: "Regarding the use which subliminal projection may have, when one considers it in light of the difficulties raised, one may question its effectiveness, rather than its ethics."[30] Neither of these two extreme positions will satisfactorily resolve the issue. Although there is, apparently, little threat to the individual from the use of subliminal stimuli, the ethical issues involved deserve a more serious and thorough examination from scholars in our academic field.

Three basic ideas have been advanced in this paper. First, through citing various studies tracing the history of research in subliminal stimulation, it was concluded that under certain circumstances and conditions, the phenomenon of subliminal stimulation does occur. Second, it was concluded that the effect of subliminal stimulation may be measured. That effect is similar to, but weaker than, the effect of supraliminal persuasion. In no case has it been shown that subliminal stimulation can cause people

to act in a way contrary to their desires. It has been shown that subliminal stimulation can assist persons in problem solving when they are motivated to solve that particular problem and when the subliminal stimulation is directly relevant to that process.

The current emphasis on descriptive research within a psychoanalytical framework has documented extensive use of subliminal stimuli in the mass media. Although the extreme claims by Key, Packard, and other critics seem to be mollified by the conclusions reached by the scientists who have studied this phenonmen, they do raise, once again, the issue of ethics. The concept of subliminal stimulation must, of course, be subjected to the same ethical criterion applied to all other forms of verbal and non-verbal communication. This issue certainly deserves a serious response from communication scholars.

ENDNOTES

[1]Wilson Bryan Key, Media Sexploitation (Englewood Cliffs: Prentice-Hall, Inc., 1976), p. 2.

[2]Vance Packard, The Hidden Persuaders (New York: David McKay Company, Inc., 1957), p. 1.

[3]Key, Media Sexploitation, p. 2.

[4]Louis Cheskin, "Subliminal Research: Implications for Persuasion," Today's Speech 7 (April 1959), pp. 19-21; and Richard Blackwell, "Comments on Subliminal Projection," Journal of Communication 8 (Spring 1958), pp. 77-83.

[5]R. McLeary and R. Lazarus, "Autonomic Discrimination Without Awareness: An Interim Report," Journal of Personality 18, 1949, p. 179.

[6]Mark Abrahamson, Interpersonal Accomodation (New York: Van Nostrand Reinhold Company, 1966), p. 45.

[7]A. Calvin et. al., Psychology (Boston: Allyn and Bacon, 1961), p. 310.

[8]As reported in L. E. Baker, "The Influence of Subliminal Stimuli Upon Verbal Behavior," Journal of Experimental Psychology 20, 1937, pp. 84-100.

[9]J. V. McConnell, R. L. Cutler, and E. B. McNeil, "Subliminal Stimulation: An Overview," American Psychology 13, 1958, p. 230.

[10]J. V. McConnell et. al., p. 230.

[11]L. E. Baker, p. 100.

[12]J. V. McConnell et. al., p. 231.

[13]R. McLeary and R. Lazarus, p. 179.

[14]New Jersey Commission To Study Subliminal Projection Created Under Assembly Concurrent Resolution No. 33 (1958). Government Document.

[15]Key, Media Sexploitation, p. 211.

[16]Abrahamson, p. 46.

[17]R. W. Black and W. Bevan, "The Effect of Subliminal Shock Upon The Judged Intensity of Weak Shock," American Journal of Psychology 73, 1960, pp. 262-267.

[18]R. C. Johnson and R. C. Zara, "The Influence of Word Meaningfulness on the Visual Duration Threshold At Various Frequency Levels," Journal of General Psychology 70, 1964, pp. 235-240.

[19]E. G. Beier and S. J. Donoviel, "Repeated Exposure of Subliminal Stimuli to Different Age Groups," Journal of General Psychology 69, 1963, pp. 181-186.

[20]E. G. Beier and M. C. Griffin, "Influence of Subliminal Cues in An Incidental Choice Task," Journal of General Psychology 69, 1963, pp. 187-192.

[21]Israel Goldiamond, "Statement on Subliminal Advertising," in Control of Human Behavior, eds. Roger Ulrich, Thomas Stachnik, and John Mabry (Glenview, Illinois: Scott, Foresman and Company, 1966), p. 279.

[22]Howard H. Kendler, Basic Psychology (New York: Appleton-Century-Crofts, 1963), p. 582.

[23]Wilson Bryan Key, Media Sexploitation (Englewood Cliffs: Prentice-Hall, Inc., 1976), and Subliminal Seduction: Ad Media's Manipulation of A Not So Innocent America (Englewood Cliffs: Prentice-Hall Inc., 1973).

[24]Key, Media Sexploitation, p. 61.

[25]Key, Media Sexploitation, pp. 55-56.

[26]Key, Media Sexploitation, pp. 157-161.

[27]Key, Media Sexploitation, pp. 10-12.

[28]Key, Media Sexploitation, p. 28.

[29]Key, Media Sexploitation, p. 211.

[30]Goldiamond, p. 279.